23 CLAIMS 1) Promoter, characterized in that it consists nucleic acid fragment comprising at least one specific functional domain of the promoter of the TaTrxh2 5 gene. 2) Promoter according to Claim 1, characterized in that said nucleic acid fragment is chosen from the group consisting of: - the nucleic acid fragment, the sequence of which extends from position -1 to position -1111 relative 10 to the ATG codon of the TaTrxh2 gene; - the nucleic acid fragment, the sequence of which extends from position -1 to position -83 relative to the ATG codon of the TaTrxh2 gene; 15 - the nucleic acid fragment, the sequence of extends from position -451 to position -591 relative to the ATG codon of the TaTrxh2 gene; - the nucleic acid fragment, the sequence of which extends from position -591 to position -11111relative to the ATG codon of the TaTrxh2 gene; 20 - the nucleic acid fragment, the sequence of which extends from position -228 to position -451 relative to the ATG codon of the TaTrxh2 gene; - the nucleic acid fragment, the sequence of 25 which extends from position -451 to position -591 relative to the ATG codon of the TaTrxh2 gene; - the nucleic acid fragment, the sequence of which extends from position -83 to position -228 relative to the ATG codon of the TaTrxh2 gene; 30 - the nucleic acid fragment, the sequence of which is that of the first intron of the TaTrxh2 gene. 3) Expression cassette, characterized in that it comprises a promoter according to either of Claims 1 and 2.

- promoter according to either of Claims 1 and 2.
- 6) Transgenic plant transformed with at least one promoter according to either of Claims 1 and 2.
- 7) Transgenic plant according to Claim 6, characterized in that it is a monocotyledon.
- 8) Use of a promoter according to either of 10 Claims 1 and 2, for controlling the expression of a gene of interest in a plant cell.

5